ANCHOR QEA

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DRAFT MEMORANDUM

To:	Gary Miller, USEPA	**Date:**	December 1, 2011
From:	David Keith, Anchor QEA, LLC	**Project:**	090557-01
Cc:	Kirk Ziegler, Kevin Russell, Anchor QEA, LLC		
	March Smith and Andrew Shafer, MIMC		
	Philip Slowiak, IP		
Re:	November 10, 2011 Modeling Workshop Summary		

This memorandum provides a summary of the second workshop conducted for the fate and transport modeling evaluation on the San Jacinto River Waste Pits Superfund Site. Participants of the work shop included the Respondents, International Paper (IP), McGinnes Industrial Maintenance Corporation (MIMC), and their representatives, U.S. Environmental Protection Agency (USEPA), Texas Commission on Environmental Quality (TCEQ), U.S. Geological Survey (USGS), and Port of Houston Authority (PHA) staff. The workshop was held via conference line and WebEx on November 10, 2011, and included the following participants:

Andrew Shafer, P.E.	MIMC
Phil Slowiak	IP
Jennifer Sampson	Integral Consulting
Kirk Ziegler, Ph.D., P.E.	Anchor QEA, LLC
David Keith, Ph.D. P.G.	Anchor QEA, LLC
Kevin Russell	Anchor QEA, LLC
Gary Miller	USEPA
Philip Turner	USEPA
Steve Tzhone	USEPA
Ed Barth	USEPA ORD
Charles Stone, P.G., P.E.	TCEQ
Vicki Reat	TCEQ
Luda Voskov	TCEQ
Linda Broach	TCEQ

Nicole Hausler	PHA
Kent Becher	USGS
Loren Wehmeyer, Ph.D.	USGS

Dr. Ziegler presented model setup and calibration procedures for the hydrodynamic and sediment transport components of the model, and Mr. Russell presented model setup and calibration procedures for the chemical fate and transport component of the model.

Various request or issues that came up during the workshop by the participants included the following:

L. Wehmeyer

- Requested that an explanation of how flow rate and sediment loads were specified at the upstream boundary be provided in the modeling report and that high flow calibration incorporate stage height as a calibration parameter. Anchor QEA agreed to provide this information in the forthcoming modeling report.

C. Stone

- Suggested that the lack of high-flow data may limit the calibration of the hydrodynamic model.
- Mr. Stone also suggested that the regression analysis used to define the relationship between sediment total organic carbon and grain size in the chemical fate model be revised to consider individual data points as opposed to binned averages. Anchor QEA has revised the regression approach as suggested.

K. Becher

- Suggested that it may speed up the report review process if sections of the report can be released as they are finished for early review.
- Mr. Becher is also going to look for higher flow data from USGS and other sources that may be applicable and forward them to the modeling team if he is successful.
- He also wanted clarification on what rating curve was utilized for specifying flow rate at the dam (upstream boundary of the model). He specifically wanted to know if the Freese and Nichols report was utilized in the development of the stage-flow rating curve. This information will be provided in the forthcoming modeling report.

- There was also some concern that the dam at Lake Houston may have subsided and the use of more recent data may be preferred if that subsidence could affect the stage-flow rating curve.
- Mr. Becher also suggested that we try to gain a better understanding of how gates on the dam at Lake Houston may be utilized and their effect on flow.
- Finally, Mr. Becher raised a question regarding which measurement method was used for quantifying solids (i.e., total suspended solids (TSS) versus suspended sediment concentration (SSC)) in the surface water samples that were utilized in the development and calibration of the sediment transport model.

The workshop presentations were posted to the project web portal following the meeting for the group's reference and review.